

Alabama Math, Science, and Technology Initiative



An **Alabama Department of Education**
Initiative to Improve Math and Science
Teaching (K-12)

AMSTI provides three basic services:

- Professional Development
- Equipment and Materials
- On-Site Support



AMSTI was built on a solid research foundation that included:

- Examining data from international and national studies (TIMSS, NAEP, Glenn Commission)
- Investigating national recommendations/standards
- Reviewing initiatives in other states
- Examining programs already in Alabama
- Reviewing Alabama courses of study and certification requirements
- Examining needs of business and industry (AMSTEC)
- Performing an extensive review of the literature
- Investigating the needs of Alabama teachers (state survey of math and science teachers)

AMSTI was designed around the concept of PARTNERSHIPS



- **Programs –**

Examples: GLOBE, ASIM, ATIM, LASER

- **Higher Education –**

Examples: UNA, UAH, A&M, USA

- **Business and the Community –**

Examples: AMSTEC, Blue Cross/Blue Shield, ALCOA, NASA, Gulf Coast Exploreum

- **Organizations –**

Examples: ACTM, ASTA, SERVE (National lab), Mobile Education Foundation, Alabama Super Computer Authority

Does AMSTI affect student achievement?

- External Evaluator:
Institute for Communication Research at The University of Alabama
- Examined the performance of AMSTI schools and non-AMSTI schools in the nine school systems where AMSTI was implemented beginning July 2002.
- 20 AMSTI schools vs. 111 non-AMSTI schools



AMSTI Schools Used In Evaluation

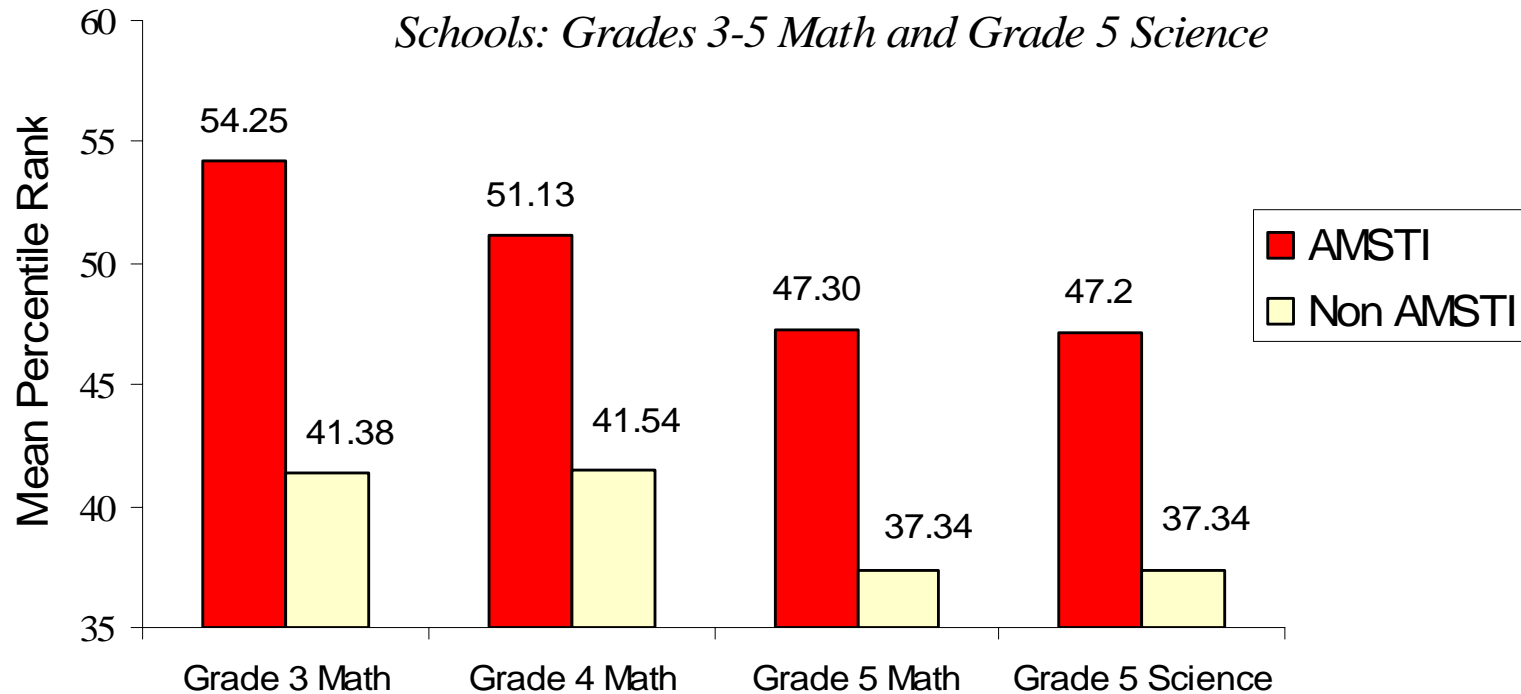
- Arab Elementary School/Arab City
- Athens Intermediate School/Athens City
- Athens Middle School//Athens City
- Bridgeport Middle School/Jackson County
- Brookhaven Middle School/Decatur City
- Cedar Ridge Middle School/Decatur City
- Challenger Middle School/Huntsville City
- Collins Elementary School/Scottsboro City
- Danville Middle School/Morgan County
- Discovery Middle School/Madison City
- Falkville High School/Morgan County
- J. E. Williams Tech. Middle School/Huntsville City
- Liberty Middle School/Madison City
- Mountain Gap Middle School/Huntsville City
- New Century Tech. High School/Huntsville City
- Oak Park Middle School/Decatur City
- Owens Elementary School/Limestone County
- Academy for Science and Foreign Language/Huntsville City
- Westlawn Middle School/Huntsville City
- Woodville High School/Jackson County



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Grades 3-5 Math and Grade 5 Science

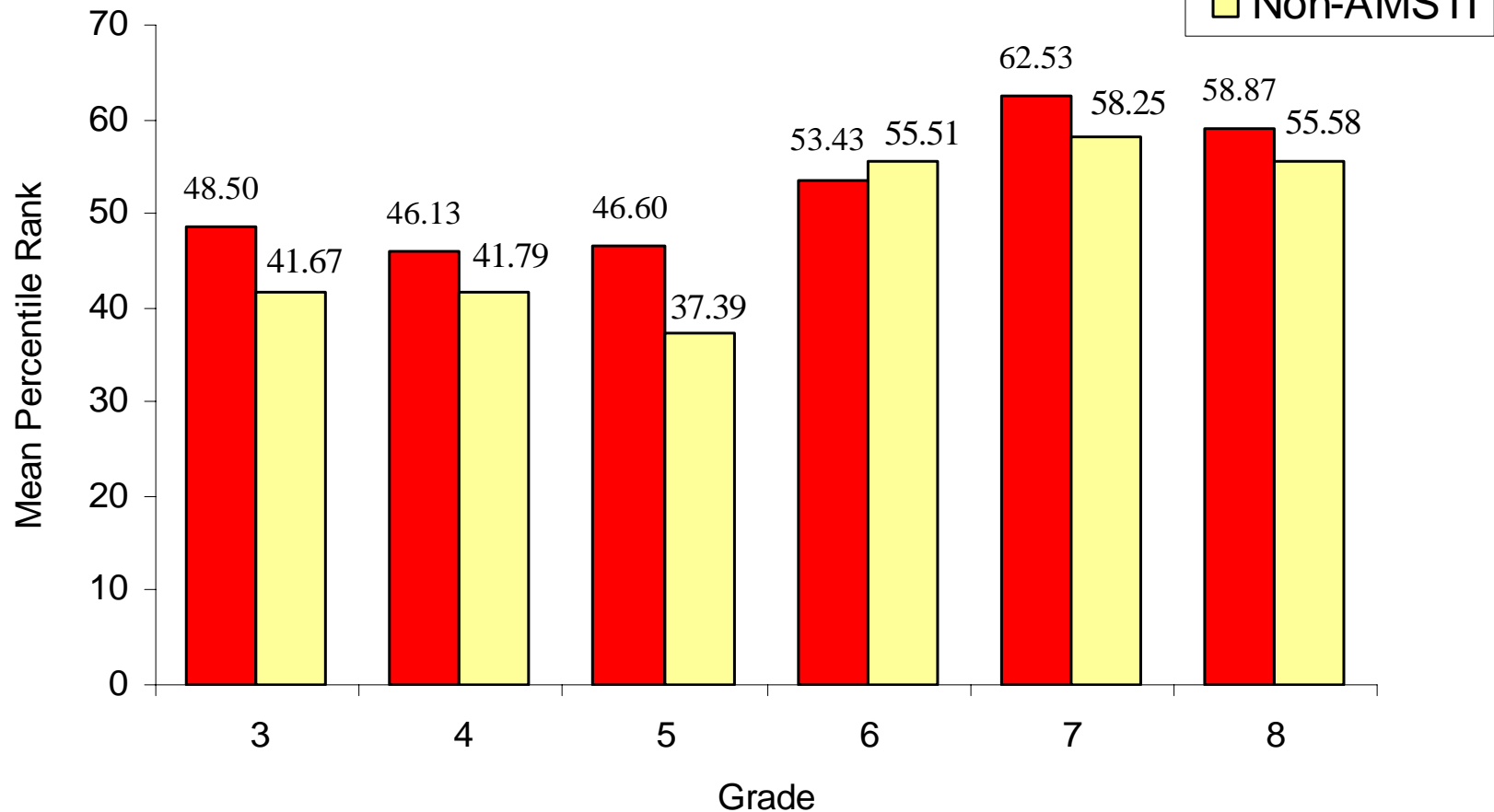
*Figure 1. Mean Percentile Ranks of AMSTI and Non AMSTI
Schools: Grades 3-5 Math and Grade 5 Science*



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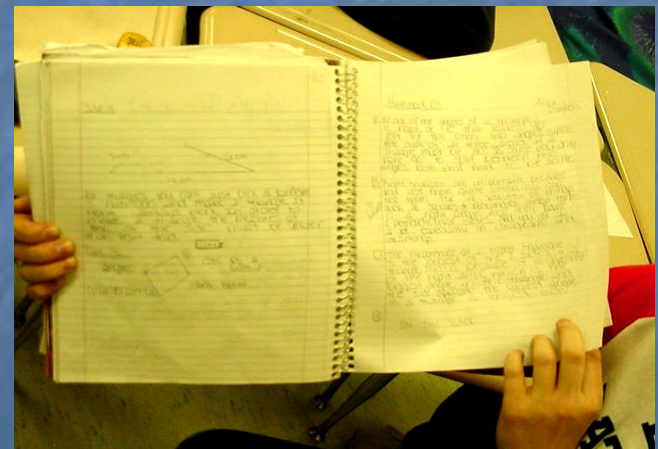
Grades 6-8 Math and Grade 7 Science

*Figure 5-2. Mean Percentile Ranks of AMSTI and Non-AMSTI Schools:
Grades 3-8 Reading*



Strong Reading and Writing Connections

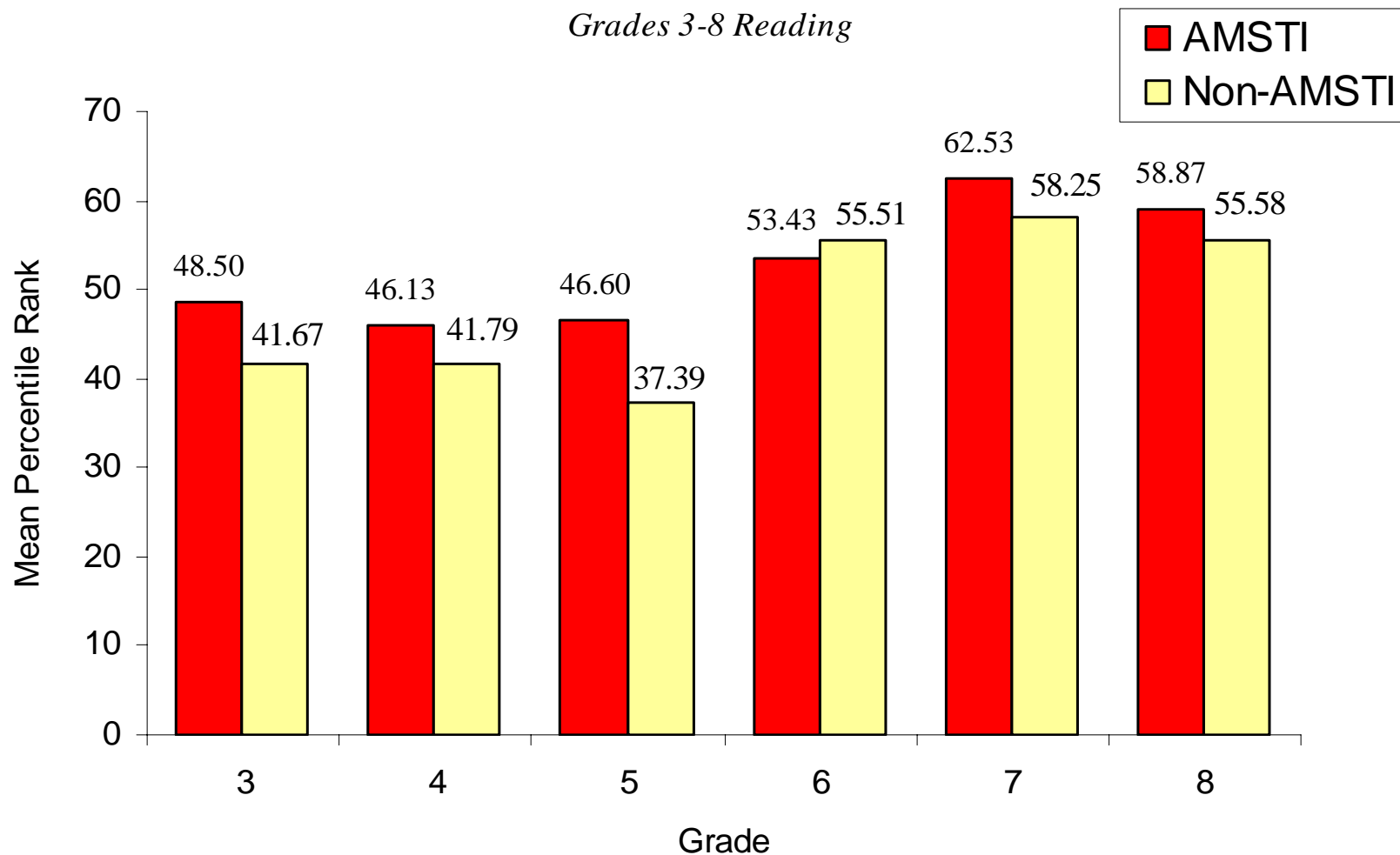
- Literature is included in many kits.
- Reading strategies advocated by the Alabama Reading Initiative (ARI) are included in AMSTI training.
- Math and science notebooks/journaling are included in AMSTI.



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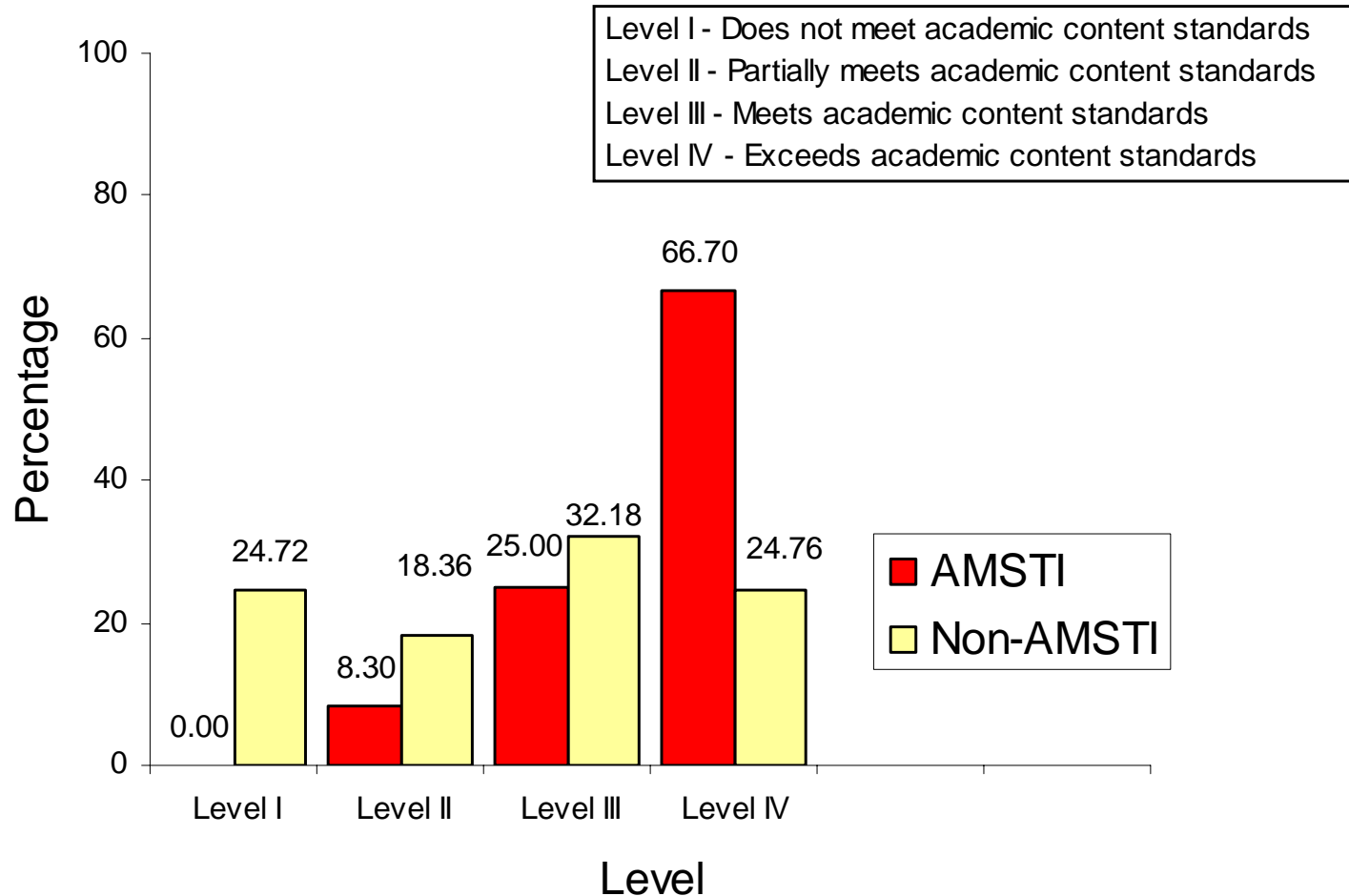
Reading, Grades 3-8

*Figure 5-2. Mean Percentile Ranks of AMSTI and Non-AMSTI Schools:
Grades 3-8 Reading*



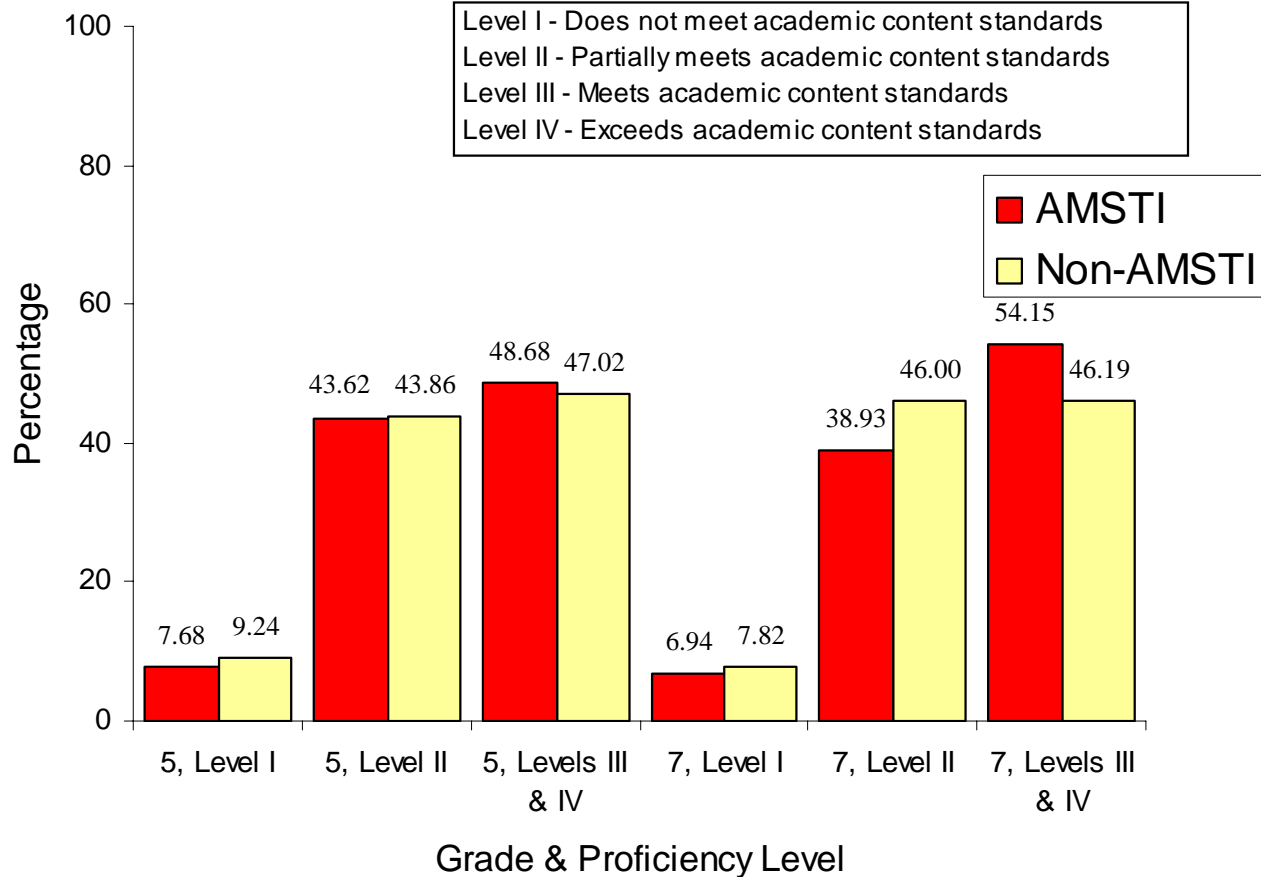
Alabama Alternate Assessment

*Figure 8-1. Achievement Levels of AMSTI Schools and Non-AMSTI Schools:
Grades 6-8*



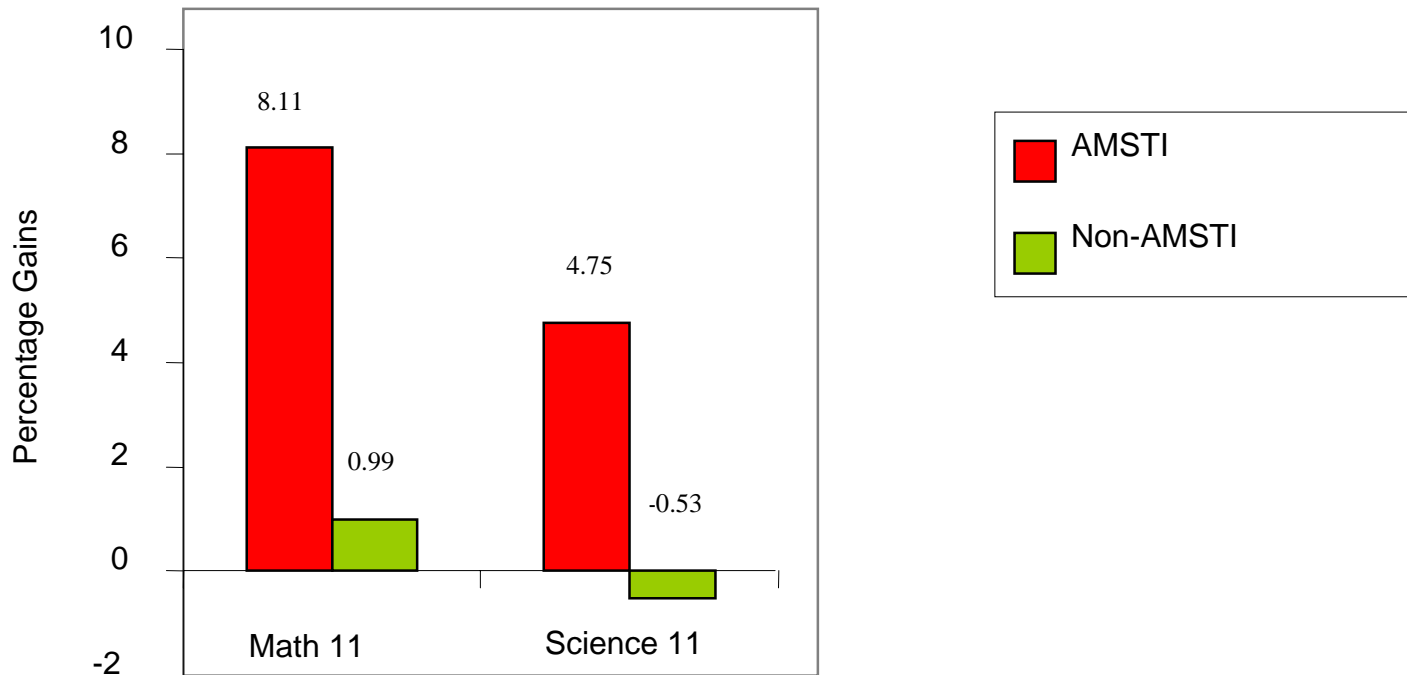
Alabama Direct Assessment of Writing (ADAW) Grades 5 & 7

*Figure 7-1. Achievement Levels of AMSTI and Non-AMSTI Schools:
Grades 5 & 7*



Alabama High School Graduation Exam (AHSGE)

Figure 3. AMSTI vs. Non-AMSTI: Comparison of Gains Made from Previous Year on AHSGE



How would you want your child to learn math and science?

Like this . . .



Or this ?



Currently, three AMSTI Sites serve
three of the state's 11 regions

USA



UAH



UNA



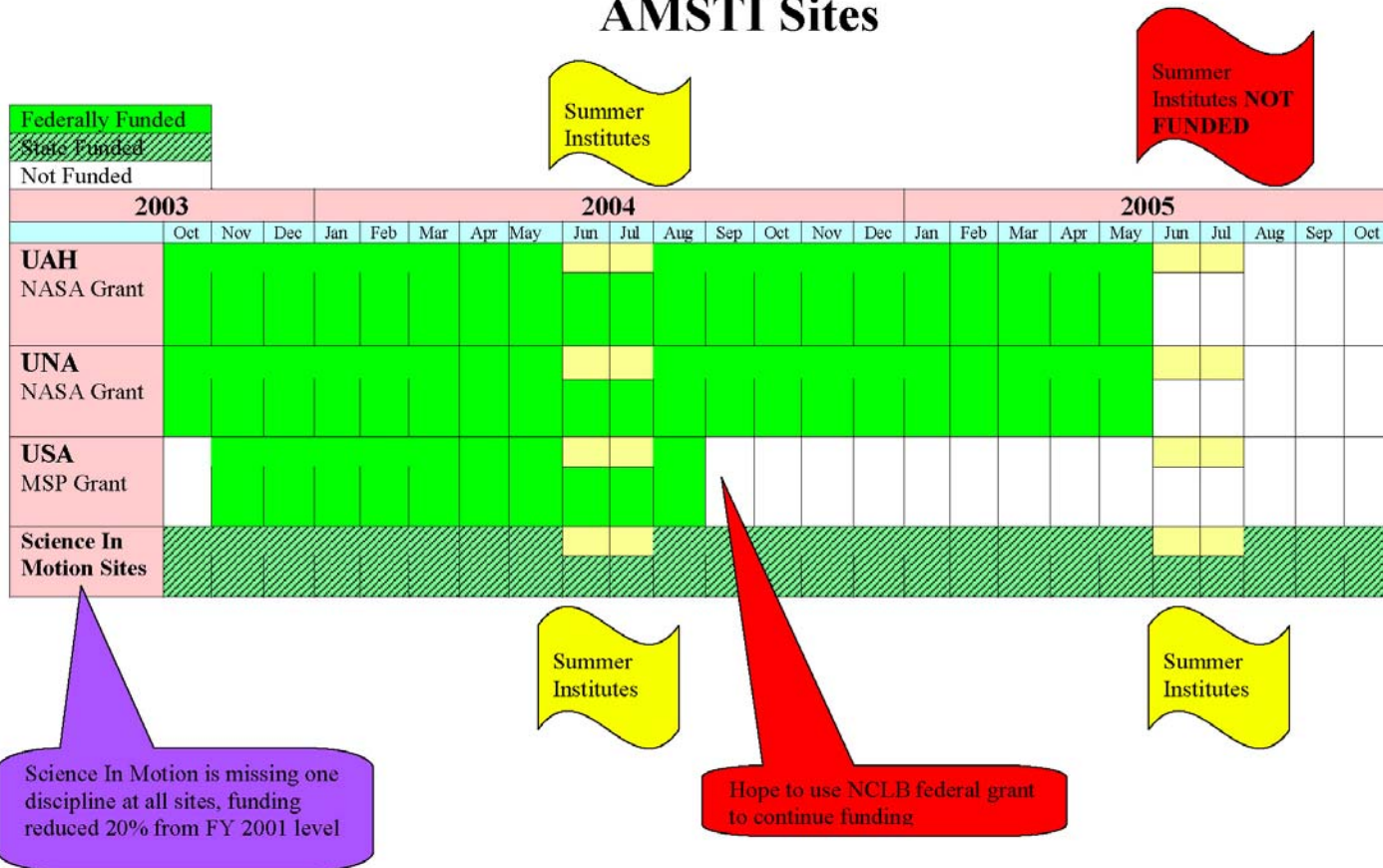
AMSTI as of July 2004

- 72 official AMSTI schools with all teachers of math and science trained (1600 teachers and administrators)
- Serving over 42,000 students on a daily basis
- Provided limited training for hundreds of other teachers across the state
- First Leadership Academy for Math, Science, and Technology (LAMST) - 90 school leadership teams from across the state trained

Funding Issue

- Funding ends at UNA, UAH sites – May 31, 2005
- Gap from June - September 2005, even if additional dollars were to be available in FY 2006
- USA funded through September 2004 – Hope NCLB grant will continue to support
- Science in Motion – Missing one of three disciplines at all sites, vehicles near useable end

Funding Status for AMSTI Sites



Alabama Math, Science, and Technology Initiative (AMSTI)

Helping students develop the
knowledge and skills necessary for
success in the workforce and
postsecondary studies

www.amsti.org

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Grades 3-5 Math and Grade 5 Science

*Figure 1. Mean Percentile Ranks of AMSTI and Non AMSTI
Schools: Grades 3-5 Math and Grade 5 Science*

